

FIRE-RESISTANT MATERIAL AND METHOD OF MANUFACTURE

ABSTRACT OF THE DISCLOSURE

The present invention provides a building material derived from straw, such as rice straw, that has significantly improved fire-resistance properties over traditional cellulose-based materials. In one embodiment, the invention provides a method of fabricating a board from milled rice straw. The milled rice straw is blended with a binder to form a mixture. The mixture is then formed into a mat with sufficient size to achieve a predetermined board thickness and density. The mat is then pressed into the board. In another embodiment, the present invention provides a fire resistant board that includes milled rice straw, a resin binder, and a fire retardant material such as an organic phosphate, zinc borate, aluminum trihydrate, sodium silicate, or even rice hulls.